	Application No.	Applicant(s)
Notice of Allowability	10/734,254	HSIEH, PHIL
	Examiner	**Art Unit**	
	Joni Hsu	2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *papers filed May 23, 2005*.

2. ☒ The allowed claim(s) is/are *1,2,4-6,8 and 9*.

3. ☒ The drawings filed on *15 December 2003* are accepted by the Examiner.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some*   c) ☐ None of the:

        1. ☒ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

    Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

DETAILED ACTION

Priority

1.   Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Response to Amendment

2.   Applicant's arguments, see pages 5 and 6, filed May 23, 2005, with respect to Claims 1, 2, 4-6, 8, and 9 have been fully considered and are persuasive. The 35 U.S.C. 103(a) rejections of Claims 1, 2, 4-6, 8, and 9 have been withdrawn.

EXAMINER'S AMENDMENT

3.   An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

4.   The application has been amended as follows:

Claims 3 and 7 are cancelled.

Allowable Subject Matter

5.   Claims 1, 2, 4-6, 8, and 9 are allowed.

       The following is an examiner's statement of reasons for allowance:

6.   The prior art taken singly or in combination do not teach or suggest performing the ROP3

command after the step of copying the source pixel and pattern for expansion and conversion, as

recited in Claims 1 and 6. Claims 2, 4, 5, 8, and 9 rely upon Claims 1 and 6, and therefore also

contain allowable subject matter.

7.   The closest prior art (Patrick) teaches a method for accelerating 2D graphics (Col. 1, lines

17-18) in a computer system (Col. 1, lines 13-18), the computer system executing graphic

commands, each graphic command having operation of source pixel, pattern or destination pixel

(Col. 13, lines 7-21), the computer system using a graphic device interface (GDI) (54, Figure 2)

to transfer corresponding graphic command to a 2D graphic device driver (46), the 2D graphic

device driver setting the graphics engine (56) based on the graphic command transferred by the

graphic device interface (GDI) such that the graphics engine performs the graphic command with

respect to what was set by the 2D graphic device driver (Col. 5, lines 28-35), the method

comprising a graphic command receiving step, which uses the 2D graphic device driver to

receive the graphic command from the graphic device interface (GDI) (Col. 5, lines 28-35).

Patrick describes that if required, the code will convert the source bytes to the color format of the

destination; and if required, the code will call a raster operation function to perform a raster

operation to apply a pattern to the converted source bytes or to the bytes in the destination (Col.

10, lines 5-9). Patrick describes that the ROP might transfer only the pattern and not the source

pixel (Col. 13, lines 18-19). If only the pattern of the graphic command is colored, then

inherently only the pattern is transferred. If source pixel and pattern of the graphic command are

both colored, then the ROP combines the source pixel and the pattern (Col. 13, lines 7-21).

Therefore, there must inherently be a graphic command determining step, which uses the 2D

graphic device driver to determine whether source pixel and pattern of the graphic command are

both colored. If source pixel and pattern of the graphic command are both colored, then the ROP

combines the source pixel and the pattern (Col. 13, lines 7-21). This combining includes a

copying step, which performs a copy procedure for copying memory corresponding to the source

pixel or the pattern, and converting its color when the source pixel and the pattern are both

colored (Col. 13, lines 7-24; Col. 10, lines 5-9); and a graphic command executing step, which

uses the 2D graphic device driver to set the graphics engine to execute the graphic command

(Col. 5, lines 28-35) according to the copied source pixel or pattern, the original source pixel or

pattern, and the destination pixel (Col. 13, lines 22-46; Col. 10, lines 10-11). However, Patrick

does not provide for, or require, copying of the source pixel and pattern in order to carry out

expansion and conversion before ROP execution.

8.   Another prior art (Bates) teaches a method for accelerating 2D graphics in a computer

system, the computer system executing ROP3 commands, each ROP3 command having

operation of source pixel, pattern or destination pixel, the method comprising a copying step,

which performs a copy procedure for copying memory corresponding to the source pixel or the

pattern, and expanding its color (Col. 6, lines 59-67; Col. 10, lines 24-35). However, Bates does

not provide for delaying execution of a ROP command until after copying the source pixel and

pattern when both are colored to enable expansion and conversion.

9.   Another prior art (Baldwin) teaches a method for accelerating 2D graphics in a computer

system, the computer system including a graphic chip (Col. 1, lines 15-17; Col. 7, lines 54-60)

having a command register to execute graphic commands (Col. 13, lines 46-65), each graphic

command having operation of source pixel, pattern or destination pixel (Col. 41, lines 16-49;

Col. 64, lines 5-9), the 2D graphic device driver setting the command register of the graphic chip

(Col. 13, lines 18-31) based on the graphic command such that the graphic chip performs the

graphic command with respect to the command register set by the 2D graphic device driver (Col.

13, lines 46-65), the method comprising a graphic command executing step, which uses the 2D

graphic device driver to set the command register of the graphic chip for executing the graphic

command according to the copied source pixel or pattern, the original source pixel or pattern,

and the destination pixel (Col. 11, lines 5-15; Col. 52, line 26-Col. 53, line 7; Col. 63, lines 20-

65). However, Baldwin does not teach providing for copying, expansion, and conversion of the

color source pixel and pattern.

10.   Any comments considered necessary by applicant must be submitted no later than the

payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for

Allowance."

Prior Art of Record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1.   Patrick (US006026239A) discloses a run-time code compiler with a state machine for efficiently transferring a data block of bytes from a source to a destination in memory of a computer system (Col. 2, lines 46-56), thereby enabling more efficient ROP execution (Col. 13, lines 7-46).

2.   Bates (US006707457B1) discloses a graphics coprocessor that comprises a logic extension to the central processing unit (Col. 19, lines 29-31), and a method for caching of data to avoid the need to refer to the system member (Col. 2, lines 28-38).

3.   Baldwin (US005764243A) discloses 2D graphics acceleration (Col. 7, lines 55-60) by parallel processing (Col. 3, lines 45-48) of multi-pixel span fragments (Col. 6, lines 1-17).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joni Hsu whose telephone number is 571-272-7785. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JH

Kee M. Tung
Primary Examiner